Lambdas-as-a-Service

Distributed Systems course project — A.Y. 2020-2021

Function-as-a-Service

“FaaS, or Function-as-a-Service, is a cloud-computing service that allows customers to execute code in response to events, without managing the complex infrastructure typically associated with building and launching microservices applications.”

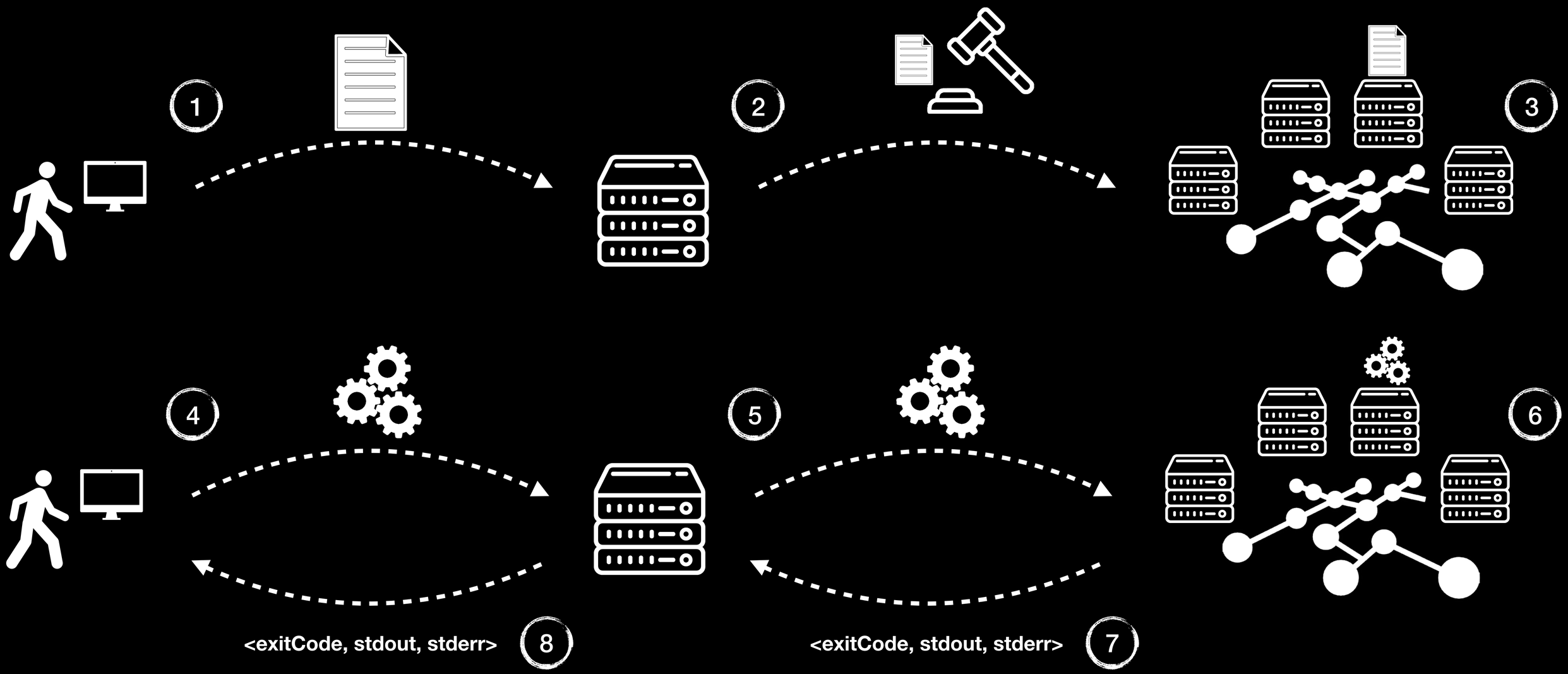
From “What is FaaS (Function-as-a-Service)?” — IBM Blog

“Pay only for the resources you use, when you use them: With FaaS, you pay only when an action occurs. When the action is done, everything stops—no code runs, no server idles, no costs are incurred. FaaS is, therefore, cost-effective […].”

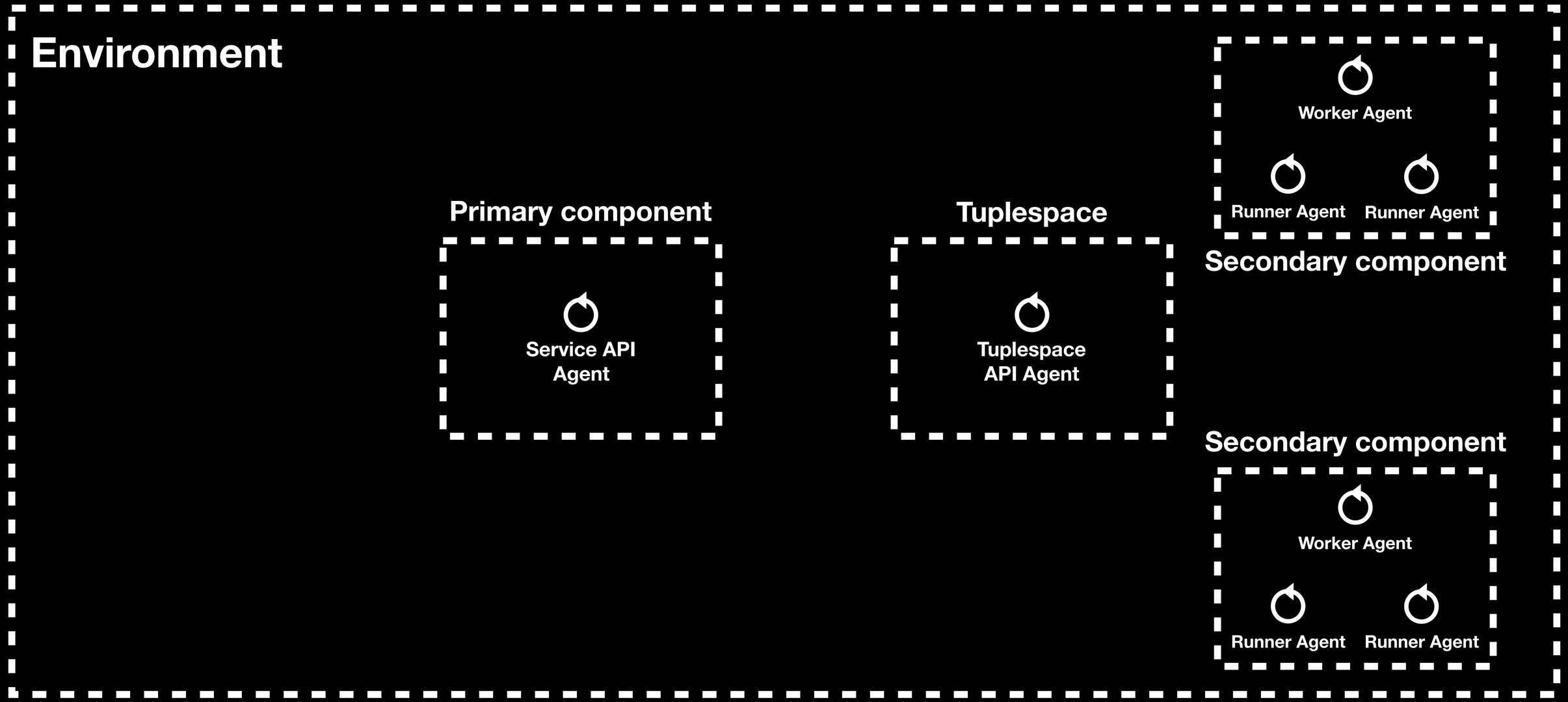
“Make each function perform only one action: FaaS functions should be designed to do a single piece of work in response to an event. Make your code scope limited, efficient, and lightweight so functions load and execute quickly.”

From “What is FaaS (Function-as-a-Service)?” — IBM Blog

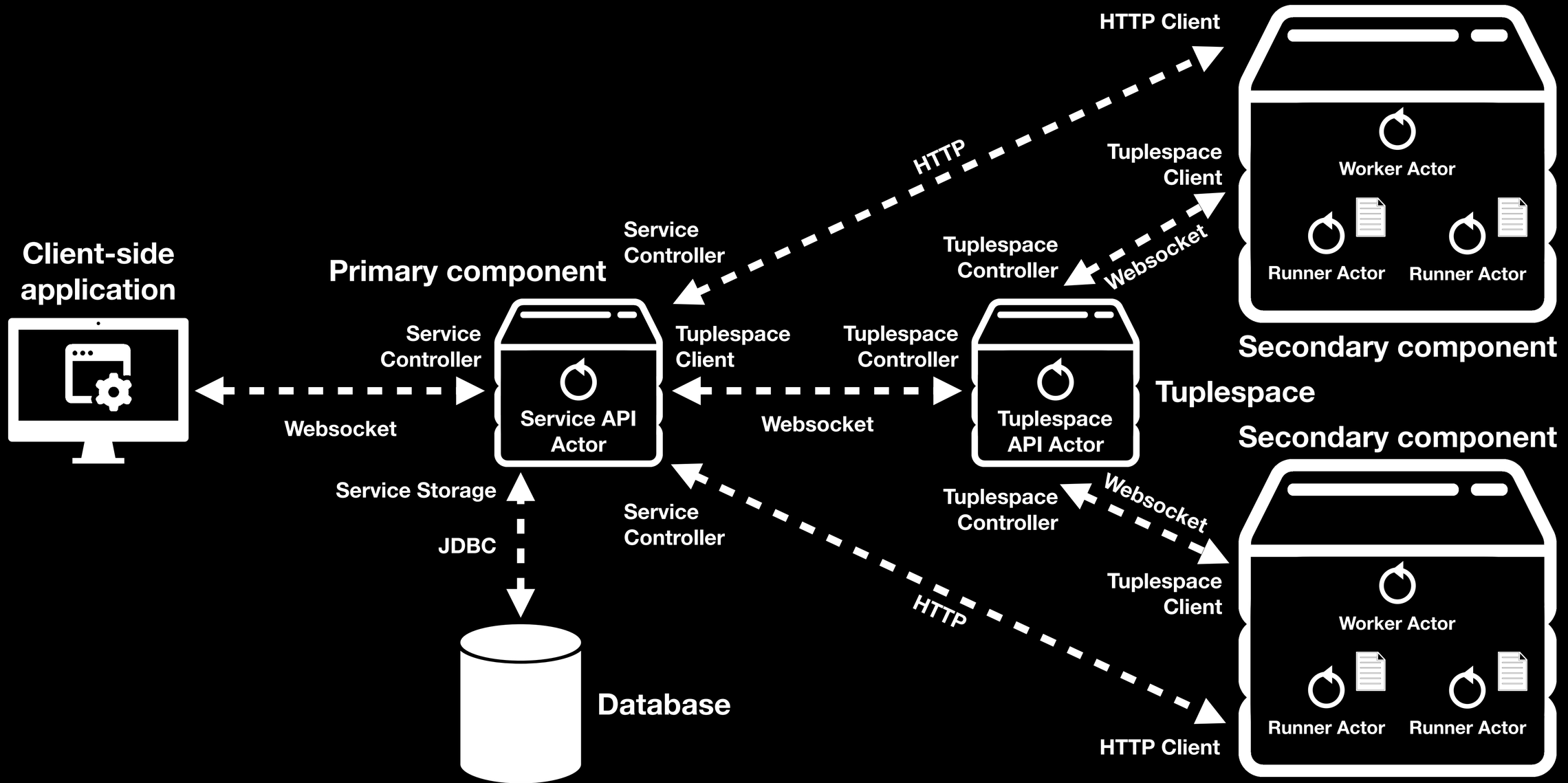
Use case



MAS Architecture



Deployment


HTTP Client
HTTP
Tuplespace Client
Worker Actor
Runner Actor
Runner Actor
Service Controller
Tuplespace Controller
Websocket
Client-side application
Primary component
Service Controller
Tuplespace Client
Tuplespace Controller
Secondary component
Tuplespace
Service API Actor
Tuplespace API Actor
Websocket
Websocket
Secondary component
Service Storage
JDBC
Service Controller
Tuplespace Controller
Websocket
Tuplespace Client
HTTP
Worker Actor
Runner Actor
Runner Actor
Database
HTTP Client

Components' interactions